

INTERNATIONAL SEARCH REPORT

International Application No
PCT/DK 03/00592

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K39/39 A61K39/385 A61K39/00 C07K14/435 A61P3/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-------------------------------|
| X | WO 01 53312 A (CHEN RUI HONG ;GOODRICH RYLE (US); HYSEQ INC (US); WANG DUNRUI (US) 26 July 2001 (2001-07-26) page 39, line 1 - line 3 page 61, line 9 - line 11 page 74, line 16 - line 28 page 75, line 16 - line 31 page 76, line 14 - line 22 page 604; claims 1,6-8 page 149 SEQ ID NO. 249 | 1-64,69, 70,73,75 |
| X | WO 02 36792 A (CATCHPOLE IAN RICHARD ;RHODES JOHN RICHARD (GB); GLAXO GROUP LTD . () 10 May 2002 (2002-05-10) page 14, line 19 - line 36 page 16, line 14-17 --- -/-- | 1,2,49, 51,69, 70,73,75 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

29 January 2004

Date of mailing of the international search report

17.02.2004

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| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
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| A | US 2001/020012 A1 (THIM LARS ET AL) 6 September 2001 (2001-09-06) paragraphs [0023],[0041] --- | 69,70 |
| A | WO 01 87335 A (BRYANT HENRY UHLMAN ;HEIMAN MARK LOUIS (US); LILLY CO ELI (US)) 22 November 2001 (2001-11-22) page 13, line 25 -page 14, line 11 --- | 1-76 |
| A | NAKAZATO M ET AL: "A role for ghrelin in the central regulation of feeding" NATURE, vol. 409, no. 6817, 11 January 2001 (2001-01-11), pages 194-198, XP002268478 page 195, right column paragraph 2 --- | 1-64, 69-76 |
| A | WO 02 066056 A (NIELSEN KLAUS GREGORIUS ;KOEFOED PETER (DK); PHARMEXA AS (DK)) 29 August 2002 (2002-08-29) abstract page 3, line 28 -page 5, line 25 --- | 1-64, 69-76 |
| P,X | WO 02 070711 A (CROWE JAMES SCOTT ;ASHMAN CLAIRE (GB); GLAXO GROUP LTD (GB); ELLIS) 12 September 2002 (2002-09-12) page 2, line 14 -page 4, line 2 page 10, line 11 page 51; claim 1 page 53; claims 15-19 ----- | 1-70,73, 75 |

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-48, 61, 65-68 all partly
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☒ Claims Nos.: 49-52, 73, 75 all partly
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Claims Nos.: 1-48, 61, 65-68 all partly

Claims 1-48 and 61 relate to methods of treatment of the human or animal body by surgery or by therapy or diagnostic methods practiced on the human or animal body (PCT Rule 39.1(iv)). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compositions, namely the induction of an immune response against ghrelin.

Claims 65-68 include in vivo testing, and do therefore relate to methods of treatment of the human or animal body by surgery or by therapy or diagnostic methods practiced on the human or animal body (PCT Rule 39.1(iv)). Nevertheless, a search has been executed for these claims. The search has been executed as if the claims relate to a method performed entirely in vitro.

Continuation of Box I.2

Claims Nos.: 49-52, 73, 75 all partly

Present claims 49-52, 73 and 75 relate to an extremely large number of possible compounds and uses of such compounds. The claims cover compounds wherein a ghrelin polypeptide is modified in any possible way which renders it immunogenic, thus including polypeptides modified for other purposes but nevertheless being immunogenic. Support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts related to the compounds mentioned in claim 19 (SEQ ID NOs:1-5), the compounds used in the examples (SEQ ID NOs: 15-17) and the general idea of the invention: inducing an immune response against ghrelin, especially by active immunotherapy.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

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